ing the sand unloading. Even blades with sintered carbide edges have no long service life and the centrifuge is quickly filled with sand which prevents continuous operation. At the Sumskiy mashinostroitel'nyy zavod im. Frunze (Suma Mechanical Engineering Plant im. Frunze) a horizontal centrifuge with worm unloader was used but also the worm was subjected to rapid wear. A new semi-automatic horizontal centrifuge type AГ-1200-34 (AG-1200-34) has been developed by the Khar'kovskiy institut khimicheskogo mashinostroyeniya (Khar'kov Institute of Chemical Engineering) for the dehydration of sand in hydraulic cleaning installations. This centrifuge differs from the other types in that the filtering screen is regenerated automatically during operation by a water jet fed at a pressure of 6 kg/cm^2 through two nozzles placed on the rotor outside. The AГ-1200-3Y (AG-1200-ZU) centrifuge is equipped with an electro-hydraulic automatic system, whose hydraulic unit is incorporated in the machine housing while the electric assembly is located on the control panel. This centrifuge consists of the cast iron housing, cover, main shaft of the layer level control, sludge unloading device, rotor, feeder and separating valve. The following technical specifications are given: rotor diameter - 1,180 mm; rotor length - 600 mm;

S/128/60/000/010/013/016/XX
A033/A133

AUTHOR: Migay, V. P.

TITLE: On the utilization of centrifuges in hydraulic cleaning installations

PERIODICAL: Liteynoye proizvodstvo, no. 10, 1960, 31 - 33

TEXT: The author enumerates some of the advantages of the hydraulic cleaning of castings and points out that in most of the plants the problem of regenerating the molding sand has not yet been solved which is mainly due to inadequate centrifuges. Thus the ПМ-1200 (PM-1200) centrifuge used at the Uralmashzavod for the dehydration of sand does not meet the demands of an up-to-date technology, since it is difficult to balance during the idle run and to adjust the friction properly. The ordinary filtering cloth wears out rapidly, while the manual unloading of the sludge is labor-consuming. The author gives a brief description of the operation cycle of the PM-1200 centrifuge and then comments on the operation of the АГ-1800 (AG-1800) centrifuge employed by the "Stankolit" Plant. This centrifuge operates with high peripheral speeds and the blade edges wear out rapidly dur-

Card 1/3

desk with a galvanometer for registration, analysis to control CO and CO_2, and instrument to measure consumption, and a manometer. There are 2 photographs and 1 diagram.

on the level of charging door 6, and is used to reburn the carbon oxide of the waste gases. On the front side of the recuperator, 4 gasburners are installed in the combustion shaft to speed up heating when the cupola starts operation. The cupola gases enter the reburning chamber, and have passed through the recuperator they escape through the pipe without making a suction plant necessary. The cupola is charged with a charging crane. The recurrent opening of the charging door does not influence the performance of the recuperator or the temperature of the blast. The main part of the recuperator consists of the ribbed radiator pipes, whose surface was increased by cross ribs. These are the main data about the recuperators: the durability of the pipes is 6-8 months; the temperature of the waste gases is 500°C, that of the gases after the reburning 900°C; the temperature of the gases leaving the recuperator is 250°C, and the blast is heated to 400-420°C. The cupolas and the recuperator are controlled from one

SOV/128-59-4-19/27

18(5)

AUTHOR: Migay, V.P., Engineer

TITLE: Recuperator for Cupola Blast Heating

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 4, pp 38-39 (USSR)

ABSTRACT: In the Leipzig Iron and Steel Plant (Leipziger Eisen- und Stahlwerke) a recuperator was built to preheat the cupola blast with the heat of reburnt waste gases. The recuperator is of a short type. It is set up between the cupolas and is designed to serve two alternately working cupolas. The lower part of the recuperator consists of the combustion shaft, which is connected with the cupolas on the level of the charging doors by wide pipes. The cold air from the blast engine enters the lower part of the recuperator through blast main 1, which consists of three ribbed radiators. The air is heated there to 400-420°C and enters the twyer box of the cupola through blast main 8. All of the blast mains and twyer boxes are protected from heat. On blast main 8 there is a branch pipe which leads some of the hot air into the cupola. It enters

Card 1/3

SOV-128-58-7-15/20

AUTHORS: Migay, V.P., and Gurevich, V.A., Engineers

TITLE: Machining Allowances for Castings in the GDR (Pripuski na mekhanicheskuyu obrabotku v GDR)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 7, pp 28-29 (USSR)

ABSTRACT: The article gives information on machining allowances used in the German Democratic Republic for steel, cast iron, and light and heavy metal casting. There are 4 tables.

1. Machine shop practice--Standards 2. Metals--Machining

Card 1/1

MIGAY, V.P.

MIGAY, V.P., inzh.

Mechanizing the travel of drying oven cars. Lit.proizv. no.8:
29 Ag '57. (MIRA 10:10)
(Foundry machinery and supplies)

MIGAY, V.P., inzhener.

Organization of patternmaking in plants of the German Democratic Republic. Lit.proizv. no.4:30-32 Ap '57. (MLRA 10:5)
(Germany, East--Patternmaking)

MIGAY, V.P., inzhener.

Foundry practices in the German Democratic Republic. Lit. proizv. no.3:23-24 Mr '57. (MLRA 10:4)
(Germany, East--Founding)

MIGAI, V. P.

12945* (Pressure Casting of Brass Parts for Cranes.) Lit'e pod davleniem latunnykh detalei kranov. V. P. Migai. *Liteinoe Proizvodstvo*, 1954, no. 2, Mar.-Apr. 1954, p. 7-8.

Composition and microstructure of brass and casting method. Table, photographs, micrographs.

ACC NR: AP6034279 (N) SOURCE CODE: UR/0281/66/000/005/0143/0151

AUTHOR: Migay, V. K. (Leningrad)

ORG: None

TITLE: Friction and heat exchange in a vortex flow inside a tube

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 5, 1966, 143-151

TOPIC TAGS: fluid friction, heat transfer, turbulent flow, vortex generator, Reynolds number

ABSTRACT: Approximate calculations of the characteristics of heat exchange and friction during turbulent flow in tubes with band-type vortex generators which are valid for 1000>Pr>0.7 are compared with experimental results obtained on an air unit. Graphs are given for hydraulic friction in tubes with band-type vortex generators, heat exchange in tubes with band-type vortex generators, effect of the Prandtl number on the efficiency of heat exchange in a turbulent flow, and power comparison of band-type vortex generators. The results shows that band-type vortex generators are most efficient at relatively small values of N (where N is power per unit area). On the other hand, wire type spiral vortex generators are more efficient at large values of N, although band-type vortex generators are still preferable at low Reynolds numbers. Orig. art. has: 4 figures, 15 formulas.

SUB CODE: 20/ SUBM DATE: 15Feb66/ ORIG REF: 007/ OTH REF: 001

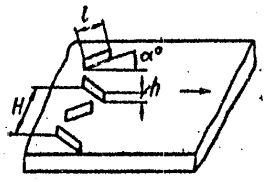
UDC: 536.24:621.643

Card 1/1

L 00688-67

ACC NR: AP6019202

resistance of the plate in the expression for η. The results are given as curves showing η as a function of inlet flow velocity w_1. The results show that gratings with apertures of 5 mm have the greatest effect due to the fact that the interface between streams is greater in this case which increases turbulence. The effect of the gratings is less as the distance between the plate and diffuser inlet is increased which is explained by attenuation of turbulence. Diffuser efficiency is increased considerably by turbulence at the inlet. With the plate located 150 mm from the inlet, η was increased by nearly 100%. The gratings were located far enough from the diffuser inlet to eliminate the effect of individual streams on the average field of velocities. A reduction in the intensity of flow separation by the gratings was observed visually and confirmed by measurements of the velocity fields at the outlet. Vortex generators are proposed for increasing the intensity of turbulent exchange in the boundary layer to improve diffuser efficiency. Tests of ten types of vortex generators showed no considerable improvement in efficiency. The optimum modification (see figure) had six plates with the following basic parameters: h=4 mm, α=20°, H=20 mm and l= 6 mm. This vortex generator increases efficiency by only 10%. Orig. art. has: 3 figures, 1 table, 1 formula.



SUB CODE: 20/13/ SUBM DATE: 19Mar65/ ORIG REF: 001/ OTH REF: 001

Card 2/2 afs

L 00888-67 EWT(1)/EWP(m) WW

ACC NR: AP6019202 (A) SOURCE CODE: UR/0143/66/000/002/0116/0119

50
B

AUTHOR: Migay, V. K. (Candidate of technical sciences)

ORG: Central Boiler and Turbine Institute imeni I. I. Polzunov (Tsentral'nyy kotloturbinnyy institut)

TITLE: Effect of initial turbulence on the efficiency of diffuser flows

SOURCE: IVUZ. Energetika, no. 2, 1966, 116-119

TOPIC TAGS: diffuser flow, diffuser R and D, turbine flow, vortex generator, turbulent boundary layer

ABSTRACT: The author describes experiments conducted to determine the effect of turbulent exchange in the boundary layer on the efficiency of diffusers with large aperture angles. Turbulence was increased by mounting two perforated plates at the diffuser inlet with openings of 5 and 12 mm spaced at intervals of 6 and 13 mm. These openings were located along straight lines. The interchangeable plates were placed in a straight supply channel at distances of 150 and 330 mm from the inlet to a rectangular diffuser (90×70 mm inlet, 175×70 mm outlet) with a unidirectional expansion of approximately 20°. Diffuser efficiency was evaluated as $\eta = \frac{p_2 - p_1}{\rho \frac{w_1^2}{2}}$, where the index 1 refers to the inlet section and the index 2 refers to the outlet section. Pressure p_1 was measured downstream from the plate so that there is no need to account for the air

UDC: 532.507

Card 1/2

L 33004-66

ACC NR: AP6014988

marked economic effect. Naturally, they can be used only where the flows are uncontaminated. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 28May65/ ORIG REF: 002/ OTH REF: 005

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001033800005-6

L 33004-66 EWT(1)/EWP(m) (N) SOURCE CODE: UR/0170/66/010/005/0600/0605

ACC NR: AP6014988

AUTHOR: Migay, V. K.

ORG: Central Boiler and Turbine Institute im. I. I. Polzunov, Leningrad (Tsentral'nyy kotloturbinyy institut)

TITLE: Artificial flow turbulizing in a tube bundle

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 5, 1966, 600-605

TOPIC TAGS: convective heat transfer, turbulent flow, heat exchanger

ABSTRACT: To create artificial turbulence, the article investigates a system of longitudinal wires arranged in the direction of the flow. The turbulence is achieved as a result of diffusion in a transverse direction due to the disturbances created by the wires. In a nine row staggered tube bundle, tests were made with three different steel grids with different wire diameters: grid No. 1--wire diameter d = 0.3 mm and cell dimension s = 1.4 mm; No. 2--0.8 and 6 x 6; No. 3--1.0 and 10 x 10. The bundle was made of tubes with a diameter of 25 mm and spacings s_1 = 37/25 = 1.48, and s_2 = 40/25 = 1.6. A diagram of the equipment is shown in the article. Experimental results are plotted in two figures. In general, the results show that use of a turbulizing grid has a

UDC: 536.25

Card 1/2

ILLEGIBLE

L 12826-66

ACC NR: AP6001676

the heat transfer can be higher by a factor of 4.5 as compared with normal turbulent flow. However, the theoretical increase in the heat transfer intensity holds only when the shear stress on the wall remains unchanged along the tube. With equal friction losses, it is possible to increase the heat transfer intensity in rough tubes by a factor of only 2.3. Therefore, current efforts to design heat transfer surfaces which generate turbulence will not produce substantial improvement in heat exchangers. Orig. art. has: 14 formulas and 2 figures. [PV]

SUB CODE: 20/13 SUBM DATE: 07Jun65/ ORIG REF: 008/ OTH REF: 006/ ATD PRESS: 4183

Card 2/2

L 12826-66 EWT(1)/ETC(F)/EPF(n)-2/EWG(m) WW

ACC NR: AP6001676 SOURCE CODE: UR/0281/65/000/006/0123/0131

AUTHOR: Migay, V. K. (Leningrad)

ORG: none

66
B

TITLE: The intensification of convective heat transfer in ducts using artificial flow turbulization

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 6, 1965, 123-131

TOPIC TAGS: heat transfer, cooling turbulence, heat exchanger, flow turbulization, turbulent heat transfer

ABSTRACT: The intensification of convective heat transfer is an important problem in attempts to decrease the weight of heat exchangers. In the present study, an analysis was made of ways to intensify heat transfer by using grooves, and baffles or rough walls or tubes filled with various packing materials. With grooves or baffles, periodic flow expansions and flow separations are obtained, which lead to a continuous renewal of the boundary layer. The analysis was based on a theoretical model which assumes two regions: one in which the eddy viscosity remains constant, and one of the viscous-sublayer type. As a result, an equation was derived which permits the calculation of the Nusselt number as a function of Prandtl and Reynolds numbers, the thermal conductivity, and the eddy viscosity. Plots of Nu vs. Re where Pr = 0.72 to 100 and at different degrees of tube roughness were obtained from the theoretical equation and previous experimental data. It was shown that the heat transfer intensity in rough tubes is considerably higher than in smooth tubes. For example, when $Re = 10^4$,

Card 1/2

UDC: 536.25

ILLEGIBLE

MIGAY, V. K.; NOVOZHILOV, L. F.

"Investigation of convective heat transfer by vortex generators."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Polzunov Central Boiler & Turbine Inst.

DUBROVSKIY, I.Ye., kand. tekhn. nauk; MIGAL, V.K., kand. tekhn. nauk; NAZARENKO, V.S., inzh.

Method for the thermal calculation of regenerative air preheaters of boiler units. Energomashinostroenie 9 no.3:47-48 Mr '63. (MIRA 17:5)

MIGAY, V.K., kand.tekhn.nauk

Hydraulic resistance of triangular channels with laminar flow.
Izv. vys. ucheb. zav.; energ. 6 no.5:122-124 My '63. (MIRA 16:7)

1. TSentral'nyy kotloturbinnyy institut imeni I.I.Polzunova.
Predstavlena kotel'noy sektsiyey TSentral'nogo kotloturbinnogo instituta.

(Heat exchangers)

The influence of the ...

S/170/63/006/003/007/014
B104/B186

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut imeni I. I. Polzunova, g. Leningrad (Central Boiler and Turbine Institute imeni I. I. Polzunov, Leningrad)

SUBMITTED: May 28, 1962

Card 4/4

$$\frac{d^2\theta}{d\xi^2} - \frac{1}{a^2}\cdot\frac{\theta}{\xi} = 0. \qquad (7).$$

The solutions are

$$\theta = \frac{\theta_1\sqrt{\xi}\left[K_{-\frac{2}{3}}(m)\,I_{\frac{1}{3}}\left(\frac{2}{3|a|}\xi^{3/2}\right) + I_{-\frac{2}{3}}(m)\,K_{\frac{1}{3}}\left(\frac{2}{3|a|}\xi^{3/2}\right)\right]}{\sqrt{b}\left[K_{-\frac{2}{3}}(m)\,I_{\frac{1}{3}}(n) + K_{\frac{1}{3}}(n)\,I_{-\frac{2}{3}}(m)\right]}, \qquad (C)$$

$$\theta = \frac{\theta_1\left[K_0(m)\,I_1\left(\frac{2}{|a|}\sqrt{\xi}\right) + I_0(m)\,K_1\left(\frac{2}{|a|}\sqrt{\xi}\right)\right]\sqrt{\xi}}{\sqrt{b}\left[K_0(m)\,I_1(n) + K_1(n)\,I_0(m)\right]} \qquad (D).$$

The heat quantities passing through the blade are determined from $Q = -\lambda\delta l(d\theta/dx)\big|_{x=0}$. Results: If the parameter $h\sqrt{2\alpha/\delta\lambda} < 1$, the blade efficiency deviates from the efficiency determined from the mean heat transfer coefficient by up to 6 %. The deviation increases with this parameter and approaches 20 % at $h\sqrt{2\alpha/\delta\lambda} = 4$. Here, α is the non-uniformity, δ the blade thickness, λ the heat conduction coefficient, x the coordinate along h, and l the width of the blade. There are 3 figures.

Card 3/4

The influence of the ...

$$\frac{d^2\theta}{dx^2} - (ax+b)\theta = 0,$$

$$a = \frac{2(\alpha_2 - \alpha_1)}{\delta\lambda h}, \quad b = \frac{2\alpha_1}{\delta\lambda} \quad \text{для случая } I; \qquad (4),$$

$$a = -\frac{2(\alpha_2 - \alpha_1)}{\delta\lambda h}, \quad b = \frac{2\alpha_1}{\delta\lambda} \quad \text{для случая } II.$$

while for those in (β) it reads $\frac{d^2\theta}{dx^2} - \frac{\theta}{ax+b} = 0,$

$$\left|\begin{array}{l} a = -\dfrac{\delta\lambda(1-\varepsilon)}{2\alpha_1 h}, \quad b = \dfrac{\delta\lambda}{2\alpha_1} \quad \text{для случая } III; \\ a = \dfrac{\delta\lambda(1-\varepsilon)}{2\alpha_2 h\varepsilon}, \quad b = \dfrac{\delta\lambda}{2\alpha_2} \quad \text{для случая } IV. \end{array}\right. \qquad (5).$$

Introducing $\xi = ax + b$ yields

$$\frac{d^2\theta}{d\xi^2} - \frac{1}{a^2}\xi\theta = 0, \qquad (6)$$

S/170/63/006/003/007/014
B104/B186

AUTHOR: Migay, V. K.

TITLE: The influence of the nonuniformity of heat transfer along the length of fins on its efficiency

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 3, 1963, 51 - 57

TEXT: There are the four different distributions $\alpha = \alpha_1 + \frac{\alpha_2 - \alpha_1}{h} x$, (A)

$$\alpha = \alpha_2 - \frac{\alpha_2 - \alpha_1}{h} x;$$

$$\alpha = \alpha_1 \left[1 - (1 - \varepsilon)\frac{x}{h}\right]^{-1}, \quad \alpha = \alpha_2 \left[(1 - \varepsilon)\varepsilon^{-1}\frac{x}{h} + 1\right]^{-1}. \quad \text{(B)}$$

and

$$\varepsilon = \frac{\alpha_1}{\alpha_2}.$$

of the heat transfer coefficient along the length h of turbine blades. Their influence on the blade efficiency is estimated. The heat transfer equation of a rectangular blade for the distributions in (A) is

Card 1/4

The intensity of mass exchange in ...

flow is observed compared with a smooth surface. The present measurements appear to show that this effect cannot be explained by an increased intensity of mass exchange. Tests in diffusers are also reported. It is shown that the degree of turbulence in a diffuser with an interrupted surface is no higher than in a smooth diffuser at the entry and substantially lower than in a smooth diffuser at the exit. The explanation is that flow separation occurs in a smooth diffuser before it does in a grooved diffuser. This is illustrated by measurements of velocity distributions. Direct measurements on diffusers also show that the delay in separation is not due to increased mass exchange.
There are 4 figures.

SUBMITTED: August 16, 1962

Card 3/3

The intensity of mass exchange in ...

velocity at the duct entry was 63 m/sec. The boundary layer at the first groove was turbulent. The turbulence in the flow was measured in the mean plane over the 14th fin and in the 14th groove and also in a smooth duct by means of the TsKTI hot wire anemometer. Two groove depths of 7 and 0.5 mm were tried. With 7 mm deep grooves, longitudinal grooves were cut in addition, creating a surface with square projections. Turbulence values computed from the recorded flow pulsations are shown in several graphs representing a traverse through the cross-section. The turbulence maximum above an interrupted surface is displaced away from the wall, but its value is only 60% higher than over a smooth surface. In surfaces with deep grooves, the source of increased turbulence is the vortex sheets which separate from the top edges of the fins. The regular vortex formation proceeds conservatively and does not induce pulsations in the main stream. The surface examined constitutes an entry length. Fully developed duct flow will be different. In the author's work already quoted it was shown that in the presence of a large positive pressure gradient over an interrupted surface with deep grooves, delayed separation of the

S/179/63/000/001/014/031
E191/E135

AUTHOR: Migay, V.K. (Leningrad)

TITLE: The intensity of mass exchange in flow past an interrupted surface

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, no.1, 1963, 124-126

TEXT: The flow past a system of rectangular grooves formed in a surface in the presence of a positive pressure gradient was considered in earlier work by the same author relating to the aerodynamic effectiveness of an interrupted surface (Ref.2: Inzh.-fiz. zh., no.4, 1962), where he has shown that the phenomena taking place are not identical with the effects caused by ordinary turbulence devices. The turbulence in flow past such surfaces is examined in the present paper. Tests were carried out in a straight duct of rectangular cross-section and in a rectangular and straight diffuser with one-sided expansion. In the straight duct, of 90 x 70 mm, one side was provided with 16 transverse grooves of 3.5 mm width separated by 1.5 mm thick fins. The air

Card 1/3

MIGAY, V.K., kand.tekhn.nauk

Investigating ribbed diffusers. Teploenergetika 9 no.10: 55-59 O '62. (MIRA 15:9)

1. TSentral'nyy kotloturbinnyy institut.
(Diffusers)

Aerodynamic efficiency of a...

S/170/62/005/004/003/016
B104/B108

Soviet references.

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut imeni I. I. Polzunova, g. Leningrad (Central Scientific Research Design and Planning Boiler and Turbine Institute im. I. I. Polzunov, Leningrad)

SUBMITTED: January 23, 1961

Fig. 1. Diagram of curved channel.

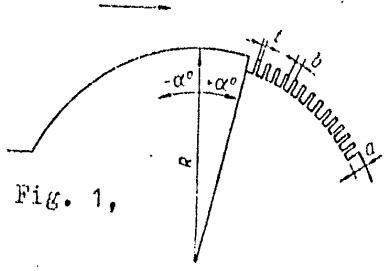


Fig. 1,

Card 2/4

S/170/62/005/004/003/016
B104/B108

AUTHOR: Migay, V. K.

TITLE: Aerodynamic efficiency of a corrugated surface

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 4, 1962, 20-24

TEXT: The flow around a corrugated surface as shown in Fig. 1 is studied. Pressure distribution is improved as compared with that on a smooth surface (Fig. 2). The best angle after which the surface is to be corrugated, is ~15°. This point lies somewhat above the separation point. Results of experiments with grooves of different depths and widths (a = 0 - 13 mm, b ~ 2.5 mm) are shown in Fig. 4. If $Re < 4.5 \cdot 10^5$, the corrugated surface renders the flow turbulent. If $Re > 5 \cdot 10^5$, this effect is negative. In the case of $a/b > 2.7$, the efficiency of the corrugated surface decreases considerably with increasing Re. Intensive vibrations were observed at $Re > 8 \cdot 10^5$ which did not appear at a/b = 2. There are 5 figures and 3

Card 1/2

3468
S/114/62/000/001/006/006
E194/E455

26.2110

AUTHOR: Migay, V.K., Candidate of Technical Sciences

TITLE: The effectiveness of a diffuser with curved outline and transverse ribs

PERIODICAL: Energomashinostroyeniye, no.1, 1962, 45-46

TEXT: It is known from previous work that the use of ribbing or other arrangements to make the flow turbulent can reduce the resistance of a diffuser over a fairly narrow range of Reynolds number but can increase the resistance at higher Reynolds numbers. It was accordingly decided to test at high Reynolds numbers diffusers of the type illustrated diagrammatically in Fig.1, where rib sizes are given in mm. The tests were made on a flat model. The uniform flow of air passed through a straight duct into the diffusers. It was found that the effectiveness of the ribbing depends on the location of the first strip between ribs. It should be somewhat downstream from the throat, so that the first rib must be near the point where the flow breaks away. It was found that ribbing of optimum design reduced the resistance of the diffuser by a factor of 1.5 as compared with a smooth construction, and the resistance value remained constant up to a Reynolds value

Card 1/2

MIGAY, V.K., kand.tekhn.nauk

Use of transverse fins for increasing the efficiency of diffusers.
Teploenergetika 8 no.4 41-43 Ap '61. (MIRA 14:8)

1. TSentral'nyy kotloturbinnyy institut.
(Diffusers)

DUBOVSKIY, I.Ye., kand.tekhn.nauk; NAZARENKO, V.S., inzh.; MIGAY, V.K., kand.tekhn.nauk; BARSHTEYN, I.K., otv.red.; KHARITONOVA, N.D., tekhn.red.

[Results of investigations of and the method for designing the regenerative air heaters of boiler units] Rezul'taty issledovanii i metod rascheta regenerativnykh vozdukhopodogrevatelei kotel'nykh agregatov. Leningrad, Biuro tekhnicheskoi informatsii, 1961. 28 p. (Leningrad. TSentral'nyi nauchno-issledovatel'skii kotloturbinnyi institut. Informatsionnoe pis'mo, no.8-61). (MIRA 16:5)

(Boilers)

MIGAY, V.K., kand.tekhn.nauk

Diffuser with transverse edges. Energomashinostroenie 6 no.4:31 Ap '60. (MIRA 13:8)

(Diffusers)

S/179/60/000/004/024/027
E191/E181

On Improving the Effectiveness of Diffuser Flows with Separation

of 35,000 (based on the diffuser entry diameter) the finned diffuser is more efficient. At a Reynolds number of 80,000 the finned diffuser is 27% more efficient. When the circular fins were interrupted by slots parallel to the generator of the diffuser cone, the effect was destroyed, although the general degree of turbulence was manifestly greater. It is concluded that the beneficial effect is due to interaction between the regular vortex system and the main flow. When the finning was incomplete and a smooth length existed at the diffuser entry, the beneficial effect was also absent, because separation took place before finning started. Fig 4 shows the efficiency ratio for a diffuser with an apex angle of 34°. The gain is even larger, and largest of all when the depth/pitch ratio of the fin is about 2 (nearly 100% gain at a Reynolds number of 90,000). It is thought, however, that the ratio of fin depth to diffuser entry diameter is more important. Measurements have shown that a finned diffuser produces a better uniformity of velocity distribution at its outlet.

Card 3/3

83310

S/179/60/000/004/024/027
E191/E181

On Improving the Effectiveness of Diffuser Flows with Separation

depth/pitch ratio exceeds 3.4 to make place for an unstable eddy motion. At a depth/pitch ratio of 2.67, there is no vortex motion between the fins until the Reynolds number reaches 700 (based on the unobstructed channel height). The flow through the channel proceeds as though the ends of the fins supported a solid channel wall. The full twin vortex develops at a Reynolds number of about 5000. An intense turbulent exchange then takes place between the channel flow and the vortex pattern. This has also been proved in heat transfer tests. These observations underlie the attempt to improve diffuser flow under conditions of large scale separation by internal finning of the diffuser. It was thought that large scale separation can be prevented by many small scale separations. Diffusers with apex angles of 23 and 34° were tested. The flow from a fan passed through a system of straightening screens, entered a nozzle and, after a parallel section of a length equal to twice its diameter, entered the diffuser. The flow at the diffuser entry had a uniformity factor of 0.97. The efficiency was determined from pressure and velocity measurements. Fig 3 shows the ratio of the efficiency of a finned to that of a smooth diffuser of 23° apex angle. Above a Reynolds number

Card 2/3

83310

S/179/60/000/004/024/027
E191/E181

26.2110

AUTHOR: Migay, V.K. (Leningrad)

TITLE: On Improving the Effectiveness of Diffuser Flows with Separation

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, No 4, pp 171-173

TEXT: Observation of the flow in a channel with internal transverse fins has shown different patterns according to the geometry of the arrangement and the Reynolds number of the flow. The fins run across the channel width and occupy a portion of the channel height from one wall towards the other. The remaining parameters are the thickness and pitch of the fins. Tests with 20 different variants of fin arrangement have shown that the main geometric parameter is the ratio of fin height to fin pitch. Between the values of 0 and 0.5, two vortices form in each space between two fins. The two vortices are disposed along a line parallel to the axis of the channel. At a depth/pitch ratio of about 1, the two vortices combine into one. When the ratio exceeds 1.3, the single vortex separates again into two, disposed at right angles to the channel axis. The bottom vortex disappears when the

Card 1/3

MIGAY, V. K., Candidate Tech Sci (diss) -- "Investigation of thermal emission and hydraulic resistance of the heating surfaces of rotating generators". Leningrad, 1959. 11 pp (Min Higher Educ USSR, Leningrad Polytech Inst im M. I. Kalinin), 150 copies (KL, No 24, 1959, 139)

BORISHANSKIY, V.M., kand. tekhn.nauk; MIGAY, V.K., inzh.

In the section of heat transfer and combustion of the Technical Turbine Manufacturing Council in Leningrad. Energomashinostroenie 4 no. 6:46-48 Je '58. (MIRA 11:8)

(Turbines)
(Heat--Transmission)

MIGAY, V.K.

Heat exchange in triangular channels in case of laminar flow.
Inzh.-fiz.zhur. no.7:18-25 Jl '58. (MIRA 11:8)

1.TSentral'nyy kotlo-turbinnyy institut, Leningrad.
(Heat--Radiation and absorption) (Fluid dynamics)

Condensing Devices for the Regenerator of a Gas Turbine Engine

of such a regenerator. The loss of air in these regenerators were high, 75 g/sec for 1 m of condensation. The air pressure was 3.16 kg/cm^2 at a temperature of 600° C. The regenerator of the American Ford Plant [Ref 4] condenses the central part of the regenerator. It is calculated for a regeneration factor of 0.80. It has 20 rpm. Soviet devices were developed by the Boiler Turbine Institute imeni Polzunov. They consist of radial, elevation, and circumferential devices (Figure 5). Seven variations of condensing devices were developed. The 6th and 7th are shown in Figure 6. Tests on the 7th revealed that there are still many drawbacks. The mounts were not solid enough. The membrane between the sockets and the guiding blades was not effective therefore 10 variations of membranes were developed (Figure 9). The most effective was membrane # 10. The loss of air with this membrane was only 47 g/sec for 1 m of condensation. These investigations were only the first step in the development of a revolving regenerator.

There are 9 figures, and 6 references, 2 of which are Soviet 2 American, 1 English, and 1 German

Card 2/3

Leningrad Central Boiler Turbine Inst. im. Polzunov

Migay V.K.

AUTHORS: Novozhilov, I.F., and Migay, V.K. 113-58-3-5/16

TITLE: Condensing Devices for the Regenerator of a Gas Turbine Engine (Uplotnitel'nyye ustroystva dlya regeneratora gazoturbinnogo dvigatelya)

PERIODICAL: Avtomobil'naya Promyshlennost', 1958, Nr 3, pp 16-19 (USSR)

ABSTRACT: Modern carburetor engines consume 210-280 g of fuel per hp/h, gas turbine engines without regenerators consume 315-510 g per hp/h, and gas turbine engines with effective regenerators have nearly the same consumption as piston type internal-combustion engines. The effective power factor of carburetor engines is 0.22-0.30, of gas turbine engines without regenerator 0.12-0.15, and with regenerator nearly the same as in piston type engines. The most effective regenerator for the gas turbine engine is the revolving regenerator in the form of a disc or a drum. Compact and simple heating surfaces were first used in foreign regenerators [Ref 2]. The condensing devices in these regenerators were designed according to the labyrinth principle (Figure 2). The national Bureau of Gas Turbines in England developed disc regenerators with self-regulating condensing devices [Ref 3]. Figure 3 shows the diagram

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Rotating regenerative air heater for a gas turbine installation. (Cont.)

114-7-8/14

small output and low compression ratios. The use of these regenerators appears to be particularly promising for transport gas turbine installations, for example, on automobiles, locomotives, river transport, etc. With some design simplification rotating regenerators may be applied successfully in boiler installations with forced draught particularly for powerful and super-powerful steam boilers.

There are 6 figures and 3 literature references (2 Russian).

AVAILABLE:

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Rotating regenerative air heater for a gas turbine installation. (Cont.) 114-7-8/14

of 0.8. In tests on the model regenerator carried out with air and gas conditions determined by calculation the regeneration coefficient obtained was 0.78. Therefore, the thermal calculation of a rotating regenerator can be recommended for the calculation of similar heat exchanges. In addition to thermal tests on models, laboratory tests were carried out to determine the heat transfer of a packing element. The element was made of corrugated strip of stainless steel 0.1 mm thick stuck with a special adhesive to a flat brass plate 1 mm thick. The corrugations formed 40 parallel channels of triangular cross section. Measurements were made of the rate of flow of water through the element and of the inlet and outlet temperatures. The experimental results were worked out in terms of criteria of similarity. The points have been inserted on the common graph, Fig.5. The same graph includes experimental points for heat transfer by contact in triangular channels obtained by other authors. The agreement between the experimental results shown in Fig.5 demonstrates that heat transfer in the packings of rotating regenerators can be studied on stationary models. It is concluded that the rotating regenerator is a relatively effective

4/5 type of air heater for gas turbine installations of comparatively

Rotating regenerative air heater for a gas turbine installation. (Cont.) 114-7-8/14

coefficient and the corresponding values of Nusselt's numbers over a definite range of Reynolds numbers may be determined from the graph, Fig.5. In tests carried out on a model regenerator, determinations were made of the dependence of the coefficient of regeneration on the flows of heating and heated media and on the rotor speeds. The inlet and outlet temperatures were measured by means of 16 chromel-alumel thermo-couples. A study was first made of the relationship between the regeneration coefficient and the rotor speed. The tests were carried out at speeds of 5, 7.5 and 14 r.p.m. and the results are given on Fig.6 together with a theoretical curve calculated from the formula of S.S.Kutateladze which is given in the paper. The good agreement between the theoretical curve and the experimental points indicates the value of the formula for calculations on rotating regenerators. The same procedure was used to make thermal calculations on the rotating model regenerator for a speed of 14 r.p.m. The initial data were determined experimentally. Calculation gave the following dimensions for the heating surface of the rotor: diameter 0.58 metres, height 0.094 metres; in the actual experimental installation these values were respectively 0.6 and 0.092 metres. A similar thermal calculation was made for a regeneration factor

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Rotating regenerative air heater for a gas turbine installation. (Cont.)

114-7-8/14

at pressures up to 4 atm. was delivered to the rig from compressors. Exhaust gas from a turbine was imitated in the initial experiments by air heated in electric heaters, and in later experiments during operation at higher temperatures, the gases were obtained from a combustion chamber working on kerosene. Leakage of compressed air was calculated as the difference between the flows of air and gas determined by means of measuring diaphragms and Prandtl tubes and was then checked by the method of gas analysis, by concentration of CO_2. Fig. 2 gives results of leakage per length of unit gland obtained during cold tests. The horizontal solid line corresponds to the upper limit of leakage recommended in the English literature for an open cycle gas turbine installation of 1500 KW. Fig.3 shows the relationship between the leakage in the number of discs, the graph is constructed for an open-cycle gas turbine installation with an output of 1,000 kW and a compression ratio of 3.5 with values of specific leakage taken from Table 2. Measurements were made of the pressure distribution under the shoes and the results are given in Fig.4. Thermal calculations on a rotating regenerator differ from those on a stationary regenerator only in the value of the heat transfer coefficient. Formulae are given for the heat transfer

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AUTHORS: Novozhilov, I.F. and Migay, V.K.,(Engineers).

TITLE: Rotating regenerative air heater for a gas turbine installation. (Vrashchayushchiysya regenerativnyy vozdukhopodogrevatel' dlya gazoturbinnoy ustanovki.) 114-7-8/14

PERIODICAL: "Energomashinostroyeniye" (Power Machinery Construction) 1957, No.7, Vol.3, pp.24-27. (U.S.S.R.)

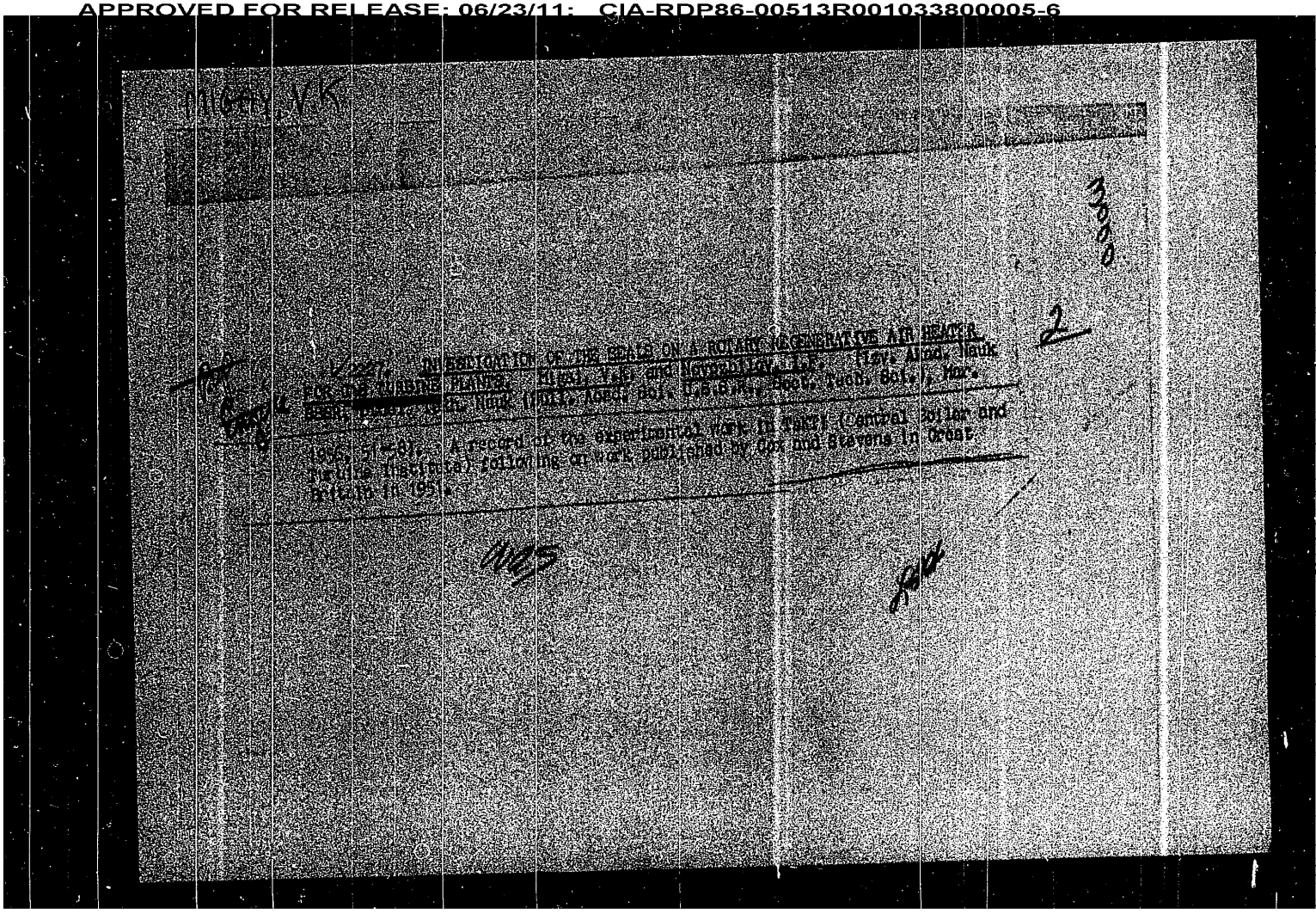
ABSTRACT : An effective method of increasing the efficiency of gas turbine installations is to use the heat of the exhaust gases. For this purpose compact and efficient heat exchangers are required. Regenerative heat exchangers with rotating heating surfaces are particularly compact. They achieve heating surfaces of 9,000 m^2/m^3 with an equivalent channel diameter of 0.3 mm. The regenerator consists of a disc or drum shaped rotor bearing the heating surface. The heating surface may be a metal strip, a wire grid, ceramic quartz or glass cloth, porous metal and so on. At the present time the most promising heating surface is a packing made of metal strip. In the rotating regenerator the flows of gas and air in opposite directions are separated from one another by a system of glands. The great temperature differences, which cause deformation of the rotor, and also the presence of critical pressure drops give rise to considerable difficulties in the design of glands. The Central Boiler & Turbine Institute has a special rig (Fig.1) which includes an experimental rotating regenerator which was used in the development of the glands. Compressed air

1/5

Migay, V K

2

5737. A ROTARY REGENERATIVE AIR HEATER FOR A GAS TURBINE INSTALLATION. Novozhilov, L.F. and Migay, V.K. (Energomashinostroenie (Pwr Mach., Leningrad), July 1957, 24-27); Test results are given for two types of seal and a packing of the plate type. (L).



MIGAY, S.

Sobinov, Leonid Vital'yevich, 1872-1934

Leonid Vital'yevich, Sobinov (from the collections of a friend.) Sov. muz. 16 no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1953, Uncl.

KRUSHEVSKAYA, D.P. [Krushevs'ka, D.P.]; SAKHARNAYA, R.Ya. [Sakharna, R.IA.]; MIGAY, M.M. [Mihai, M.M.]; KHUDIN, O.S.

Manufacture of regular knit outerwear on cotton machines. Leh.prom. no.4:12-15 O-D '62. (MIRA 16:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut po pererabotke iskusstvennogo i sinteticheskogo volokna (for Krushevskaya, Sakharnaya, Migay). 2. Kiyevskaya trikotazhnaya fabrika No.2 (for Khudin).
(Knitting machines)

MIGAY, Mariya [Mihai, Maryia]

We should be respectful to other people. Rab.i sial. 38 no.12:16-17 D '62. (MIRA 16:1)

1. Prybiral'shchytsa Parytskay garadskoy bibliyateki, Svetlagorski rayen.

(Disabled)

MIGAY, Mariya Iosifovna [Mihai, Maryia], tekhnichka

My family. Rab.i sial. 37 no.12:5 D '61. (MIRA 15:2)

1. Parytskaya bibliyateka, Svetlagorski rayen, Gomel'skay voblastsi.

(Husband and wife)

MIGAY, Konstantin Vasil'yevich, kand. med. nauk; TIMOFEYEVA, Ol'ga Nikolayevna, kand. tekhn. nauk; YUSHTIN, Yevgeniy Ivanovich, inzh.; DROZDOV, D.F., inzh., retsenzent; ABRAMOVICH, V.A., inzh., retsenzent; OSMINKIN, Ya.M., nauchn. red.; SOSIPATROV, O.A., red.

[Safety measures during electric welding operations in shipbuilding] Tekhnika bezopasnosti pri elektrosvarochnykh rabotakh v sudostroenii. Leningrad, Izd-vo "Sudostroenie," 1964. 59 p. (MIRA 17:5)

MIGAY, K.V., kand.med.nauk

Industrial hygiene and sanitation measures during electric welding in shipbuilding. Sudostroenie 28 no.5:58-61 My '62. (MIRA 15:7)
(Shipbuilding--Safety measures)(Welding--Hygienic aspects)

MIGAY, K.V.

Provisional instructions on safety techniques. Avtom.svar. 15 no.10:94 O '62. (MIRA 15:11)
(Welding--Safety measures)

MIGAY, Konstantin Vasil'yevich; SIDOROCHKIN, S.S., nauchnyy red.; KUSKOVA, A.I., red.; SHISHKOVA, L.M., tekhn.red.

[Improvement of working conditions in electric welding] Ozdorovlenie uslovii truda pri elektrosvarochnykh rabotakh. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl., 1960. 100 p. (MIRA 13:7)

(Welding--Hygienic aspects)

MIGAY, K.V. (Leningrad)

Phagocytosis of electric welding dust. Vrach.delo no.3:283-284 Mr '59. (MIRA 12:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda.
(PHAGOCYTOSIS) (ELECTRIC WELDING--HYGIENIC ASPECTS)

ILLEGIBLE

MIGAY, K.V.

Results and prospects in research on safety measures in manual electric arc welding. Avtom.svar. 10 no.6:74-80 N-D '57. (MIRA 11:1)

1.Vesoyuznyy nauchno-issledovatel'skiy institut okhrany truda Vsesoyuznogo TSentral'nogo soveta professional'nykh soyuzov.
(Welding--Safety measures)

KRASINSKAYA, G.F.; MIGAY, K.V.

Prophylactic measures in the production and finishing of asbestos-cement products. Gig.i san. no.9:47-49 S '53. (MLRA 6:8)

1. Leningradskiy nauchno-issledovatel'skiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov.
(Asbestos cement) (Industrial hygiene)

MIGAY, K.V.

Determination of thermal properties of clothing material. Gig.i san. no.8:52 Ag '53. (MLRA 6:9)

1. Leningradskiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov. (Textile fabrics)

MIGAY, K.V.

Special clothing for the protection of man against low temperatures. Gig. sanit., Moskva no.6:23-29 June 1952. (CLML 23:2)

1. Of the All-Union Scientific-Research Institute for the Protection of Labor VTsSPS.

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CA

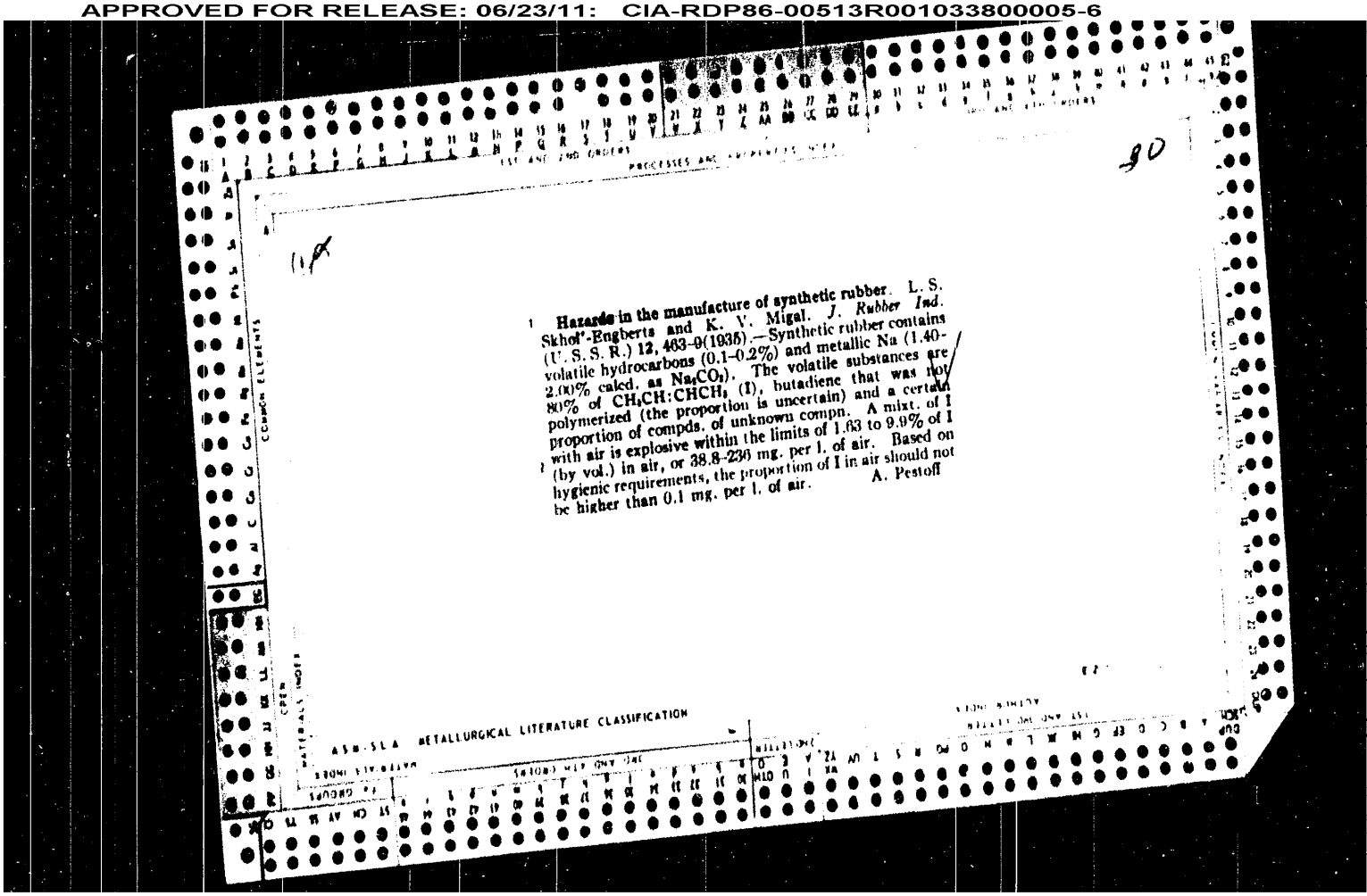
MIGAL, K.V.

Protective clothing for work with mercury and its cleaning from the latter. K. V. Migal (Leningrad Ind. Health Inst.). *Gigiena i Sanit.* 1950, No. 6, 17-20. Vapor permeability tests (static) showed that all cotton, flax, and wool fabrics are penetrable within 1-2 hrs.; rubber and plastic-treated cloth in 3-5 hrs. The best was a protective fabric developed by the Kharkov Industrial Health Institute (not described) which gave no penetration for 3-5 days. Since all fabrics are permeable to vapors, the case of contamination by the metal is the only controllable factor, on the basis of which tightly-woven cotton fabrics are best and are recommended. Directions for washing are supplied. G. M. K.

A-U Sci Res Inst. for Labor. Protection
VTsSPS, Leningrad

MIGAY, K. V.

"Method of Testing Temperature Regime in Delousing Chambers," Gig. i San., No. 5, 1949. Chair of Social Hygiene, Leningrad Sanitary Hygienic Med. Inst., -c1949-.



1 **Hazards in the manufacture of synthetic rubber.** L. S. Skhol'-Engberts and K. V. Migal. *J. Rubber Ind.* (U. S. S. R.) **12**, 483–9(1935).—Synthetic rubber contains volatile hydrocarbons (0.1–0.2%) and metallic Na (1.40–2.0)% calcd. as Na_2CO_3). The volatile substances are 80% of $CH_2CH:CHCH_2$ (I), butadiene that was not polymerized (the proportion is uncertain) and a certain proportion of compds. of unknown compn. A mixt. of I with air is explosive within the limits of 1.63 to 9.9% of I (by vol.) in air, or 38.8–236 mg. per l. of air. Based on hygienic requirements, the proportion of I in air should not be higher than 0.1 mg. per l. of air. A. Pestoff

MAKSIMOV, Aleksandr Pavlovich. Prinimali uchastiye: PUSHKARENKO, G.V., arkhitektor; MIGAY, I.B., dotsent; KOZACHENKO, V.S., dotsent; KUDLOV, L.V., assistent. DANILEVSKIY, A.S., otv.red.; KRASOVSKIY, I.P., red.izd-va; SHKLYAR, S.Ya., tekhn.red.

[Industrial residential and public buildings and structures for mining enterprises] Promyshlennye i grazhdanskie zdaniia i sooruzheniia gornykh predpriiatii. Izd.2. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 492 p. (MIRA 13:2)

1. Dneprogiproshakht (for Pushkarenko). 2. Dnepropetrovskiy inzhenerno-stroitel'nyy institut (for Migay, Kozachenko). 3. Kafedra stroitel'stva gornykh predpriyatiy Dnepropetrovskogo gornogo instituta (for Kudlov).
(Mine buildings) (Mining engineering)

ZAICHENKO, I., arkhitektor; MIGAY, I. [Myhai, I.], arhitektor

Projects for the planning of villages were worked out by volunteers. Sil'.bud. 12 no.9:13-14 S '62. (MIRA 15:11)
(Dnepropetrovsk Province--City planning)

ILLEGIBLE

ILLEGIBLE

MIGAS, Edward

Divergent results in radiological and surgical examination of the lung in tuberculosis. Postepy hig. med. dosw. no.2:133 '60.

1. Z Zakladu Ftyzjochirurgii S. D. L. Sanatorium im. dra O. Sokolowskiego w Zakopanem Kierownik: prof. dr W. Rzepecki.

(TUBERCULOSIS PULMONARY diag)

PONOMAREV, V.V.; MIGARSKAYA, L.B.

Heats of combustion of some amino acids. Zhur. fiz. khim. 34 no. 11:2506-2508 N '60. (MIRA 14:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Amino acids) (Heat of combustion)

MIGALY, Akos, dr.

Blood alcohol determination in the laboratory of factory physicians. Munkavedelem 7 no.7/9:50-51 '61.

1. Csepel Vas- es Femmuvek Uzemorvosi Rendelo laboratoriumi szakrendelője.

1. MIGALOVSKIY, [illegible] N.

2. USSR (600)

4. Quack Grass

7. Controlling quack grass in potato cultivation. Kost. sel'khoz. No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

MIGALOVSKAYA, YE. N.

20152 MIGALOVSKAYA, YE. N. K voprosy o travmaticheskoy tserebrasteniI. Sbornik trudov vracheb.-san. sluzhby kazansk, zh. d., vyp. 2, 1948, s. 52-56

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

MIGALOVSKAYA, G.N.,; SHEYNMAN, A.I.

Obstetric forceps. Akush. i gin. no.6:23-27 N-D '55 (MLRA 9:6)

1. Iz rodil'nogo doma imeni V.S. Snegireva (glavnyy vrach L.I. Krotova, nauchnyy rukovoditel' prof. M.A. Petrov-Maslakov) Leningrad.

(OBSTETRIC, appar. and instruments
Muzo's forceps)

MIGALOVSKAYA, G. N.

Migalovskaya, G. N. - "On the question of pubiotomy," Collection dedicated to the Maternity Hospital im. Snegireva on its 175th anniversary, Leningrad, 1949, p. 202-06

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

SHOSTAKOVSKIY, M.F.; CHEKULAYEVA, I.A.; MIGALKINA, E.V.

Vinyl ethers of ethanolamines in diene synthesis. Report No.1: Interaction of vinyl ethers of β-(dialkylamino)-ethanols and monoethanolamine with cyclopentadiene. Izv. AN SSSR Otd.khim.nauk no.1:152-155 Ja '62. (MIRA 15:1)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Ethanol) (Ethers) (Cyclopentadiene)

MIGALKIN, A.

Migalkin, A. "Introducing [illegible] cultivation into fields in every possible way," [Yabut ASSR] 7, To Leninskom puti, 1949, No. 1, p. 9-13

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

MIGALINSKAYA, L.N., inzh.; MOROZ, A.I., kand.tekhn.nauk; AKSEL'ROD, L.S., doktor tekhn.nauk

Measuring the flow of supercooled and boiling liquefied gases through throttling devices. Trudy VNIIKIMASH no.3:11-22 '60. (MIRA 13:9)

(Flowmeters) (Liquefied gases)

Air-Cooling by Scrubber-Water Evaporation

SOV/62-59-6-4/22

Investigations conducted by VNIIKIMASh on the useful effect of individual plates were carried out with an industrial model of nitrogen-water cooler for the KGN-30T. The mean value of the useful effect η amounted to 0.5. It was also found that on diminishing the water consumption for cooling the cooling performance of the scrubber can be maintained only by increasing the number of plates. The nitrogen-water cooler of the above type effects a cooling of from 50 to 5-10° by a simple control of the water quantity supplied. There are 5 figures and 8 references, 2 of which are Soviet.

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through as a countercurrent to ards the water, and the latter is cooled. This, in turn, cools the air in scrubber II. This scheme is not sufficient for additional cooling in high-pressure units. There, scrubber I is replaced by a nitrogen-water cooler of the KGN-30T type. The calculation given by Professor L. D. Berman (Ref 2) of the heat exchange taking place is here replaced by a simplified procedure. It takes place by the aid of the enthalpy temperature diagram of nitrogen or air at 100% relative humidity. For the pressure of 1 atm. the values of enthalpy may be found in the psychrometric tables (Refs 2 and 3). From the enthalpy temperature diagram and the load lines, that are theoretically calculated from the heat balance of the individual scrubbers, or from the values of entropy and temperature recorded at the outlet and inlet points of the scrubbers, the number of theoretical plates in the scrubber n_{th} can be determined by the gradient method. (Fig 3). The number of required plates in apparatus n can be determined from the number of theoretical plates and from the useful effect η of the plates according to the formula:

$$n = \frac{n_{th}}{\eta}$$

5(1)

AUTHORS: Aksel'rod, L. S., Candidate of Technical Sciences, Bil'man, V. V., Candidate of Technical Sciences, Narinskiy, G. B., Candidate of Technical Sciences, Migalinskaya, L. N., Engineer

TITLE: Air-Cooling by Scrubber-Water Evaporation (Skrubbernoye vodoisparitel'noye okhlazhdeniye vozdukha)

PERIODICAL: Kislorod, 1958, Nr 6, pp 15 - 22 (USSR)

ABSTRACT: In many areas of the country climatic conditions in summer cause a rapid heating of the circulating cooling-water for the air to be compressed in compressors. Moreover, the increase of air temperature on the way to the fractionating block causes power consumption for the compression and fractionation of air to be considerably increased. An attempt had been made to use the nitrogen coming from the fractionating block for water cooling and to use the latter for air cooling in the compressors. Experiments have shown, however, that this way allows only an additional cooling of air. The additional cooling scheme is as follows: 2 scrubbers are connected in series. In scrubber I, nitrogen is directed

Card 1/3

SMOLANKA, I.V.; MIGALINA, Yu.V.; STANINETS, V.I.

Intramolecular cyclization of esters of 8-quinolinol and α-halosubstituted acids. Ukr. khim. zhur. 31 no. 11:1183-1186 '65 (MIRA 19:1)

1. Institut organicheskoy khimii AN UkrSSR i Uzhgorodskiy gosudarstvennyy universitet.

Handbook for Mechanics (Cont.) SOV/1361

Metal spraying (Antoshin, Ye.V., Engineer)
Nature of the method and its characteristic features 25
Equipment for metal spraying 25
Structure and properties of sprayed metal coatings 26
Various applications of metal spraying in equipment maintenance 33
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Wire for metal spraying 35
Quality control of sprayed metal coatings 41
Protection of workers and safety engineering 42

Welding and surfacing of metals (Gershman, D.Kh., Engineer; and Kondratovich, V.M.) 42
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Handbook for Mechanics (Cont.)

reconditioning and making of parts in maintenance operations; metal-working, hoisting, and pipe-fitting; finishing operations involved in maintenance work; checking parts for precision; basic bench and assembly work; maintenance of power equipment; and maintenance of foundations.

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MIGALINA, Ye. Ya.

25(5) PHASE I BOOK EXPLOITATION SOV/1361

Spravochnik mekhanika mashinostroitel'nogo zavoda v dvukh tomakh. t. 2: Tekhnologiya remonta (Handbook for Mechanics of Machine-building Plants in Two Volumes. Vol. 2: Technology of Repair Operations) Moscow, Mashgiz, 1958. vii, 1059 p. 40,000 copies printed.

Resp. Ed.: Yu.S. Borisov, Engineer; Ed.: K.G. Tsopin, Engineer; Tech. Ed.: T.F. Sokolova; Eds. of Set: Yu.S. Borisov, Engineer, A.P. Vladziyevskiy, Doctor of Technical Sciences, and R.A. Noskin, Candidate of Technical Sciences; Managing Ed. for Reference Literature (Mashgiz): V.I. Krylov, Engineer.

PURPOSE: This handbook is intended for personnel responsible for repair and maintenance operations in a machinery-manufacturing plant.

COVERAGE: The handbook contains information pertinent to the organization of repair and maintenance operations, design-preparation of maintenance work, and economics of maintenance. Information on scientific research organizations and plants participating in preparation of this volume is included in the coverage of Volume 1 (SOV/1359). There are no references. Basic topics covered include

Card 1/26

PARSHINA, N.V.; MIGALINA, V.P.; FROLOVA, L.F.; NIKITINA, N.A.

Chromatographic study of the antibiotic 1618 as compared with closely related antibiotics. Trudy Inst. mikrobiol. i virus. AN Kazakh. SSR. 8:142-151 '65. (MIRA 18:11)

L 22513-65
ACCESSION NR: AR4039965 S/0299/64/000/009/B025/B025

SOURCE: Ref. zh. Biol. Sv. t., Abs. 9B187

AUTHOR: Abramova, N. V.; Migulina, V. P.

TITLE: Chromatographic investigation of antibiotic substances of Actinomyces longisporus Ruber strain 1618

CITED SOURCE: Tr. In-ta mikrobiol. i virusol. AN KazSSR, v. 7, 1963, 107-116

TOPIC TAGS: actinomycetes, Actinomyces longisporus Ruber, antibiotic, chromatography

TRANSLATION: Act. longisporus Ruber strain 1618 forms two antibiotic substances, a red one and a white one. According to spot positions on the chromatograms (in the 8 solvent systems used) the red substance is similar to antibiotic 2703 and the white one is similar to the antibiotic fluorin. From a resume.

SUB CODE: LS ENCL: 00

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